

AMENDED CLAIM SET:

1. (currently amended) A solid titanium catalyst component for olefin polymerization, said catalyst comprising titanium, magnesium, halogen, and an electron donor (b), which catalyst is obtained by bringing a solid adduct consisting of a magnesium compound and an electron donor (a) into contact with an electron donor (b) and a liquid titanium compound at one time or plural times in divided portions by ~~at least one method selected from (A) a method of contacting the materials in a~~ components of the catalyst ~~suspended state in the coexistence of in~~ an inert hydrocarbon solvent and ~~(B) a method of contacting the materials plural times in divided portions.~~

2. (currently amended) The solid titanium catalyst component for olefin polymerization according to claim 1 or claim 6, wherein the electron donor (b) is a compound having two or more ether linkages.

3. (currently amended) The solid titanium catalyst component for olefin polymerization according to claim 1 or claim 6 ~~[[3]]~~, whose particle diameter is 30 to 150 μm .

4. (currently amended) A catalyst for olefin polymerization, comprising the solid titanium catalyst component for olefin polymerization described in claim 1 or claim 6 ~~any one of claims 1 to 3~~ and an organometallic compound catalyst component containing a metal selected from the groups 1 to 3 ~~I to III~~ in the periodic table.

5. (currently amended) A process for olefin polymerization, which comprises polymerizing at least one olefin selected from the group consisting of ethylene and C₃₋₂₀ α -olefins by using the catalyst for olefin polymerization described in claim 1 or claim 6 [[4]].

6. (new) A solid titanium catalyst component for olefin polymerization, said catalyst comprising titanium, magnesium, halogen, and an electron donor (b), which catalyst is obtained by bringing a solid adduct consisting of a magnesium compound and an electron donor (a) into contact with an electron donor (b) and a liquid titanium plural times in divided portions by contacting the components of the catalyst suspended without an inert hydrocarbon solvent.

7. (new) The solid titanium catalyst component of claim 1, wherein said inert hydrocarbon solvent is an aliphatic hydrocarbon, an alicyclic hydrocarbon, an aromatic hydrocarbon, a halogenated hydrocarbon, or a mixture thereof.

8. (new) The solid titanium catalyst component of claim 1, wherein said inert hydrocarbon solvent is toluene.